CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
Central Coast Region
895 Aerovista Place, Suite 101
San Luis Obispo, CA 93401

2009 BASIN PLAN TRIENNIAL REVIEW
COMMENT SUBMITTAL FORM

Please use this form to submit comments that you would like the Central Coast Regional Water Quality Control Board to consider during the Triennial Review of the Water Quality Control Plan for the Central Coastal Basin (Basin Plan). Comments submitted through the Triennial Review process provide the public with an opportunity to assist the Central Coast Regional Water Quality Control Board in identifying issues that need to be addressed through Basin Plan amendments in order to best meet the water quality planning needs of the Region.

The Central Coast Regional Water Quality Control Board is moving in a fundamentally new strategic direction, based upon a Vision of Healthy Functioning Watersheds. This new Vision represents a refocusing of our approach – a new framework for how we conduct business and achieve measurable results. The Vision structures our work towards our highest water quality priorities and more strategically aligns us with the anticipated challenges and opportunities in water quality and positions our agency to respond more nimbly to unexpected ones. For additional information about the Regional Board's Vision process, please see the following website: http://www.waterboards.ca.gov/centralcoast/publications_forms/publications/vision/index.shtml

Comments about any aspect of the Basin Plan are welcome. Of particular interest are comments about water quality standards (e.g., beneficial uses and water quality objectives) and comments that relate or align with the Regional Board's Vision.

Please email completed form(s) to centralcoast@waterboards.ca.gov. Please include the words "Basin Plan Triennial Review" in the subject line of your communication. Hardcopy forms may be mailed to the address in the header of this form, sent to the attention of Steven Saiz. Fax completed forms to (805) 543-0397. If you have multiple comments (i.e., multiple issues, concerns, suggestions), please submit a separate comment submittal form for each.

Deadline for submittal is Tuesday, **May 26, 2009 at 5:00 p.m.** Thank you for your participation!

1. CONTACT INFORMATION:

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2. DATE of COMMENT:

May 26, 2009

3. COMMENT:

a. Please specify the topic of your comment. (*Please try to limit topic to ten words or less*.)

Bacteria TMDL Approach Basin Plan Amendment

b. Please provide a detailed description of your issue/concern/suggestion, and explain why it needs to be addressed. (*There is no limit to the amount of text for the comment. The space will expand as needed*.)

The City of Santa Barbara requests that highest priority be given in the Triennial Review to the development of a Basin Plan Amendment outlining a rational, contemporary approach to Bacteria TMDLs, including TMDLs for beaches, in advance of beginning the Santa Barbara Beaches Bacteria TMDL process in earnest. Although a kickoff meeting was held in March 2008 and preliminary modeling was conducted, the project charter was never distributed, making this is an ideal time to pause and reflect prior to moving ahead with outdated objectives and approaches.

The current Bacteria TMDL approach outlined by the Board at the kickoff meeting uses standard indicators (fecal indicator bacteria) to assess water quality and develop implementation plans. The approach does not include mechanisms for focusing on the known limitations with indicator bacteria, namely that they can be derived from non-human or even non-waste sources, that they may not correlate with illness rates or more specific indicators such as enteric viruses, and that there is increasing evidence that they grow in the environment, e.g. on storm drains, sediment, or decaying kelp wrack (see attached). The impact of taking an approach that uses indicator bacteria concentrations exclusively is that implementation plans will focus on reducing indicator bacteria numbers first and foremost, rather than reducing the risk to human health. As a specific example, the City of Santa Barbara and UCSB have conducted testing for DNA-based human waste markers, and there has been no correlation between the methods. If we would have focused only on indicator bacteria hotspots, we may have put in diversions or other BMPs in the wrong places for reducing the risk to human health. In addition, some of the implementation tools suggested in other Bacteria TMDLs to reduce fecal indicator bacteria involve steps that are contradictory with the Board's Vision of Healthy Watersheds and goal of increasing healthy Aquatic Habitat, as described in the Brief Issue Descriptions for the Triennial Review process. For example, steps such as scaring birds away from beaches with loud noises or diverting water from stream channels could harm aquatic habitat. Prior to taking such steps, it should be confirmed that the source of indicator bacteria represents a true risk to human health.

The indicator bacteria method has been retained because it is cheap, easy to perform, and there has been nothing better available. However, after decades of little progress in addressing beach water quality nationwide, we are now at a very exciting time for the field, and the promise of routine use of indicators to correctly identify risks to human health is imminent. The USEPA is under consent decree to develop new recreational criteria that will be implemented by October 2012. In support of this objective, the agency has laid out a Critical Path Science Plan that outlines research to address several questions, including:

1. What is the risk to human health from swimming in water contaminated with human fecal matter as compared to swimming in water contaminated with non-human fecal matter?
2. How well do culture and molecular methods for various indicators (singly or in combination) correlate with swimming-related illnesses?
3. Are the indicators, methods and models suitable for use in different types of waters and for different CWA [Clean Water Act] programs?

In addition, regulatory developments have occurred since the Santa Barbara Beaches TMDL kickoff that illustrate the need for an Amendment. As background information, note that based on material provided for stakeholder and kick off meetings for the Santa Barbara Beaches TMDL, it was suggested that a reference beach approach would likely be used, following the lead of Los Angeles and San Diego. While aspects of the reference beach approach are desirable, and it should be included in the Amendment, there are four major problems that suggest it should not be the default or exclusive approach used. First, as outlined above, the approach takes a blanket approach to reducing indicator bacteria concentrations, without focusing on those posing the greatest risk. Second, there are very few reference beaches available (e.g. the San Diego TMDL uses Leo Carrillo in Los Angeles County as the reference beach). There should be multiple reference beaches for varying beach types, i.e. sheltered, kelp-laden, cobble-strewn, etc. Third, the choice of statistics for choosing the time period for the data set is arbitrary and may not be protective enough for human health. Fourth, by requiring that a reference beach be in an undeveloped watershed, it effectively deems all increases in fecal indicator bacteria over the reference beach as harmful, and does not allow that increased concentrations of harmless indicators may be related to numbers of storm drains and impervious surfaces, rather than fecal input. This may also discourage the implementation of restoration projects that may lead to increased birds and wildlife, due to potential fecal inputs.

The San Diego Beaches TMDL moved forward with the reference approach despite a lack of appropriate reference beach(es) and a request by stakeholders to use the natural exclusion approach. The TMDL notes that the natural exclusion approach will be addressed in the first review. The State Water Board recently approved on consent an Amendment to the San Diego Basin Plan that directly outlines bacteria objectives and allowable TMDL approaches, including the reference beach and natural exclusion approaches. The natural exclusion approach directs the reduction of anthropogenic indicator bacteria (typically from human and domestic animal waste) first, and allows exceedances based on “natural, uncontrollable sources.” The Amendment states explicitly, “It is not the intent of the [San Diego] Regional Board to require treatment or diversion of natural water bodies or to require treatment of natural sources of bacteria. Such requirements, if imposed by the Regional Board, could adversely affect valuable aquatic life and wildlife beneficial uses supported by water bodies in the Region.” Now that the Amendment has received State Water Board approval, the San Diego TMDL will likely be revised, involving numerous hours of staff time and stakeholder input.

The City believes that the Central Coast Regional Board would save the community significant resources and lead to a higher chance of protecting human health if it addresses the larger picture approaches and goals of the TMDL prior to proceeding with writing the Project Charter and Project Report. The City urges the Board to take into consideration the rapid advancement of science in this field and either postpone the Beaches TMDL until the

epidemiology studies, indicator development, and new criteria have been released or develop an Amendment that allows flexibility as new data are generated.

The City recommends that the Basin Plan Amendment contain the following sections, drawing heavily from the San Diego Basin Plan Amendment, "A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Implementation Provisions for Indicator Bacteria Water Quality Objectives to Account for Loading from Natural Uncontrollable Sources Within the Context of a Total Maximum Daily Load:"

1. Updated REC-1 objectives.
2. A recommendation for immediate reconsideration of the REC-1 objectives upon the USEPA's release of new criteria in 2012.
3. A statement confirming that the driving motive is to protect human health during recreational contact.
4. Prioritization of reducing indicators/sources based on their likely impact on human health: first, human waste/sewage; second, domesticated animal waste, and third, wild animal waste.
5. A statement confirming that reduction of indicators that do not relate to human health risk, e.g., indicator bacteria growing in the environment is not a goal of the TMDL.
6. Approved approaches to the TMDL, including a reference beach approach and a natural exclusion approach. For both approaches, it should be noted that urbanization, i.e. undergrounding of natural stream channels, leads to increased indicator bacteria that are not necessarily indicative of human or animal waste.
7. A review of the SHELL beneficial use designation on the Central Coast.

The City feels that the amendment proposed here meets the proposed ranking criteria as follows:

1. Vision Alignment: The issue is aligned with the Vision of Healthy Watersheds and Measurable Goal of protecting Aquatic Habitat because it seeks to find solutions to recreational exceedances that have the greatest ability to protect human health while minimizing unnecessary harm to the aquatic habitat.
2. Water Quality Standards Improvement. The proposed amendment will improve water quality standards by bringing them in line with the state-of-the-science and with recent regulatory changes, along with providing room for adapting objectives based on advances in research and the EPA's upcoming revised criteria.
3. Effectiveness. The proposed amendment will improve clarity and consistency to the TMDL process, and improve coordination among staff and programs at the Board that involve monitoring, listing water bodies, revising beneficial uses, and developing implementation plans.
4. Public Interest. There is high perceived public interest in the Santa Barbara Beaches TMDL, as demonstrated by the high turnout at the TMDL kickoff meeting.

4. GEOGRAPHIC SCOPE OF COMMENT:

Mark the box ( ) that best corresponds to the geographic scope of your comment:

☒	Entire Central Coast Region
☐	Multiple watersheds

	If the watersheds and/or waterbodies are known, please specify here:
☐	Single watershed
☐	Multiple waterbodies
☐	Single waterbody
☐	Beach or coastal waters
☐	Other:
☐	None of the above (comment is administrative or has no direct geographic scope)

5. ADDITIONAL INFORMATION ABOUT YOUR COMMENT:
Information about the following items may help us better understand and evaluate your comment. For any that are applicable to your comment, please elaborate in the space provided. Leave blank if item is not applicable or if you are unsure.

a. If you think a Basin Plan amendment addressing your comment would likely have widespread stakeholder support, please explain in the space below and, if known, list supportive stakeholder(s) with phone or email contact(s). (*The space will expand as needed.)*

The City of Santa Barbara can provide contacts upon request.

b. If substantial resources have been invested in developing technical information that would support a Basin Plan amendment addressing your comment, please explain in the space below. (*The space will expand as needed*.)

The City of Santa Barbara has spent over $350,000 of Measure B funds in developing, testing DNA-based microbial source tracking tools to correctly identify types and locations of sources of waste to drains, creeks, and beaches. In addition, the City has received over $400,000 in grant funding from the State Water Board's Clean Beaches Initiative Program to continue developing and testing these tools. Finally, the substantial resources are being spent by other agencies and researchers, as displayed at the recent USEPA Beaches Conference, in efforts to improve testing methods, source tracking, and TMDL processes (see reference section).

c. If substantial resources are likely available to augment Regional Board resources needed to develop a Basin Plan amendment addressing your comment, please explain in the space below. (*The space will expand as needed*.)

The San Diego Basin Plan cited above can serve as a template for the beginning the process, saving substantial staff effort in developing an amendment for the Central Coast.

6. HOW TO BRING ADDITIONAL INFORMATION TO OUR ATTENTION:

a. If you would like to direct us to additional information that supports/supplements your comment, e.g., web address, report citation, contact person for follow-up, please give direction in the space below. (*The space will expand as needed*.)

San Diego Basin Plan Amendment: A Resolution Amending the Water Quality Control Plan for the San Diego Basin (9) to Incorporate Implementation Provisions for Indicator Bacteria Water Quality Objectives to Account for Loading from Natural Uncontrollable Sources Within the Context of a Total Maximum Daily Load.

http://www.waterboards.ca.gov/sandiego/board_decisions/adopted_orders/2008/R9-2008-0028.pdf

Technical Report supporting Basin Plan Amendment above:
http://www.waterboards.ca.gov/sandiego/water_issues/programs/basin_plan/docs/amendments/issue_7/7-25-08update/Final_Technical_Report_June08.pdf

USEPA Presentation on New Recreational Criteria given at the 2009 Beaches Conference:
http://epa.gov/waterscience/beaches/meetings/2009/pdf/beach_session_tue_break.pdf

For additional information, see USEPA Technical Document on Criteria Development:
http://www.epa.gov/waterscience/criteria/recreation/plan/developmentPlan.pdf

USEPA Critical Path Science Plan, outlining ongoing state-of-the-science and ongoing studies:
http://www.epa.gov/waterscience/criteria/recreation/plan/cpsplan.pdf

City of Santa Barbara Microbial Source Tracking Report, demonstrating how non-indicator bacteria tecniques are used to identify human waste:
Laguna Watershed and Water Quality Improvement Feasibility Analsyis
http://www.santabarbaraca.gov/NR/rdonlyres/B6A274E7-3D46-4E51-B7F8-C04334477829/0/LagunaWatershedStudyFINAL.pdf

b. If you are submitting additional information that supports/supplements your comment, e.g., reports, articles, data sets, please tell us what you are sending so that once received we can link it to your comment. (*The space will expand as needed*.)

We are submitting electronically a second microbial source tracking report, the Final Report produced by UCSB, outlining methods development, testing, and use of DNA-based methods to identify locations and sources of contamination in storm drains.

We are also submitting an informal report by Santa Barbara County illustrating rapid growth of indicator bacteria on kelp.

Note: Supporting information may be emailed to centralcoast@waterboards.ca.gov; sent to the attention of Steven Saiz at the address in the header of this form; or faxed to (805) 543-0397. Please include the words “Triennial Review” in the subject line of your communication.

Our email system can accommodate files up to approximately 15MB. If you are uncertain of how best to submit additional supporting information, please call 805-549-3879.

Thank you for participating in the Triennial Review of the Basin Plan!

For additional information about the Triennial Review process, please see the following website:
http://www.waterboards.ca.gov/centralcoast/publications_forms/publications/basin_plan/triennial_review/index.shtml